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A REVIEW OF THE NEW ENGLAND SPECIES OF
CHRYSOTOXUM.

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In 1907 at the Museum of Comparative Zoölogy I saw Loew's types of *Chrysotoxum* which were in one of the small glass-covered boxes in which the collection was shipped. This box has since been misplaced. I made notes on the species at the time. These were published in *Psyche* (vol. 14, p. 77-79, 1907) and specimens compared with the types are in my collection. In the *Canadian Entomologist* (vol. 56, p. 34-40, 1924), Mr. C. Howard Curran has published a "Synopsis of the genus *Chrysotoxum* with notes and descriptions of new species." The determinations in that paper are so much at variance with my notes and homotypes, that I cannot refrain from reviewing the subject. My remarks, with one exception, are confined to our eastern species, as material from the West is limited.

Chrysotoxum ventricosum Loew.

In my note on this species I state, "The two types are marked 'W. T.' [Washington Territory], and the original description gives 'Washington.' Osten Sacken's Catalogue gives 'Distr. Columbia,' as does Williston in his Synopsis of the Syrphidae." It is this error in habitat that has misled authors. Loew's note, that this species is similar to *Chrysotoxum arcuatum* Linné except that the base of the abdomen has black pile, seems to confirm my statement, for my homotype from Colorado agrees with *Chrysotoxum arcuatum* in my collection except for the black pile mentioned. The scutellum of the types shows faintly the dark translucent disk so characteristic of the genus and cannot be said to be "totum flavum." The short antennal joints and globose abdomen readily separate it from the eastern forms that have been inadvertently referred to it. I have seen no specimens of *Chrysotoxum ventricosum* east of Colorado.

Chrysotoxum derivatum Walker.

This and the preceding species have served as a dumping-place for doubtful species. There are only three items in Walker's description of any real value for identification: "Scutcheon

brown, with a yellow band on the fore border.—Length of the body $3\frac{1}{2}$ lines.—Albany River, Hudson Bay.” The small size (7 mm.) is unusual for species of this genus. A male specimen, from Penobscot County (Section 2, Range 7), Maine, August 2, 1910 (Dr. J. A. Cushman), measuring 8 mm. in length agrees with Walker’s description. The scutellum has a dark band across the middle, leaving a narrow basal and apical margin of yellow, the basal half of all of the femora is black, the length of the first and second joints of the antennae is about equal, while the length of the third equals the first and second together. Coming from the Canadian life-zone I have little doubt but that this is the true *Chrysotoxum derivatum*. A female (8 mm.) from Sherborn, Massachusetts, August 24, 1912 (C. A. Frost) I am also referring to this species. The only other specimen before me referable to this species is a female (9 mm.) from Grand Lake, Newfoundland, June 28, 1906 (O. Bryant). It might be of interest to note in connection with Mr. Curran’s remarks under this species that Walker also records *Chrysotoxum fasciolatum* from Albany River, Hudson Bay (List of Diptera, vol. 4, p. 541, 1849).

Chrysotoxum pubescens Loew.

Chrysotoxum luteopilosum Curran, Can. Ent., vol. 56, p. 36, 1924.

The specimen which I compared with the type agrees in every respect with the paratypes of *Chrysotoxum luteopilosum* Curran in the Society’s and my own collection. The yellow spot above the front coxae was evidently overlooked by Loew in describing it. “Alae cinereo-hyalinae, adversus costam lutescentes,” can only apply to this species, as none of the other species has a distinctly yellow costal margin. That this is *Chrysotoxum pubescens* is further corroborated by specimens in the Osten Sacken collection from “Illinois,” bearing the number “94” and labeled “*Chrysotoxum pubescens*” in Osten Sacken’s handwriting. In regard to numbered specimens Osten Sacken in his “Record of my Life Work in Entomology,” 1903, p. 94, says: “Labels with numbers corresponding to the same numbers in the Osten Sacken collection (in the same museum) represent specimens which were sent to Loew, while keeping duplicate specimens in my own collection.” There seems to be no doubt that these are some of the original lot.

Chrysotoxum laterale Loew.

This species is allied to *Chrysotoxum pubescens*, but the broad yellow lateral margin and almost complete fasciae on the third to fifth abdominal segments readily distinguish the species. The costal margin is brown, and there is a dull yellowish spot above the front coxae. In New England it is rare; I took one specimen at New Haven, Connecticut, June 11, 1914, and it is recorded from “Maine” by Curran.

Chrysotoxum plumeum, new species.

Chrysotoxum ventricosum Curran (*nec* Loew), Can. Ent., vol. 56, p. 39, 1924.

♂.—Face in profile straight, below the antennae, not noticeably concave and not protruding at the lower end of the facial stripe; face yellow with yellowish pile, front and vertex black with black pile, upper part of the front whitish pollinose; antennae brownish black, first and second joints about equal in length, the third as long as the first and second combined, arista yellow; scutellum yellow with a dark discal spot and long yellow pile; a pearl-gray spot above the front coxae; abdomen with prominent yellow pile, longest on the second segment, first segment yellow on the sides, second, third, and fourth segments with slightly arcuate bands, narrowly interrupted, those on the second and third reaching the lateral margin, the fourth narrowly separated; posterior marginal band on the second segment very narrow, on the third wider and expanded at the center, on the fourth more expanded and projecting forward as a point; fifth segment with two oblong yellow spots and a central triangle, narrowly connected with the spots near the posterior angles; legs yellow, basal third of the first and middle femora dark brown; wings grayish hyaline with the brownish costal margin extending to the end of the costal vein. Length 10 mm.

♀.—Front with a wide whitish-pollinose band midway between the base of the antennae and the ocelli, narrowly interrupted; band on the posterior margin of the fourth abdominal segment connected at the lateral margin; the spots and triangle on the fifth segment are narrower, more elongated and very narrowly separated at the posterior angle. Legs entirely yellow. Length 11 mm.

Eight specimens. *Holotype*, Woodbury, New Jersey, April 29; *allotype*, Riverton, New Jersey, September 14. *Paratypes*, Folsom, Pennsylvania, May 8, 1892, and Riverton, New Jersey, September 8, in the author's collection; Montgomery, Massachusetts, May 27, 1899 (Dr. Geo. Dimmock), and South Norwalk, Connecticut, August 4, 1908, in the collection of the Boston Society of Natural History; Falls Church, Virginia, May 9 and September 23 (Nathan Banks), in the Museum of Comparative Zoölogy.

Readily separated from the following species by its straight, not concave, face and usually shorter antennae.

Chrysotoxum perplexum, new species.

♂.—Face convex with a prominent tubercle at the lower end of the facial stripe, vertex and front black, the latter with the upper part whitish pollinose; the first joint of the antennae longer than the second and the third slightly longer than the first and second combined, arista reddish; scutellum with a broad transverse black band, leaving a narrow basal and apical margin of yellow; sides of the first abdominal segment yellow, the arcuate bands on the other segments narrowly interrupted; those on the second and third segments extend to the lateral margin, that on the fourth narrowly separated; posterior margin of the second segment entirely black; on the third and fourth the yellow posterior marginal band is narrow on the sides and expanding in the middle, widest on the fourth; the two elongated spots on the fifth segment are curved and the central triangle is small, leaving a very broad V-shaped mark; base of the front and middle femora dark brown, costal margin of the wing brown. Length 12 mm. Female similar to the male.

Holotype, Base Station, Mt. Washington, New Hampshire, August 16, 1916 (C. W. J.); *allotype*, Bolton Mt., Vermont,

September 12, 1922, 2600 ft. (Owen Bryant); and the following *paratypes*: MAINE, Southwest Harbor, August 20, and Bar Harbor, September 10; NEW HAMPSHIRE, Franconia (Mrs. A. T. Slosson); MASSACHUSETTS, Chester, August 6, 1914, Auburndale, August 9, and Brookline, September 6; CONNECTICUT, Colebrook, September 8, 1922 (W. M. Wheeler) in the collection of the Boston Society of Natural History; also Lexington, Massachusetts, August; Falls Church, Virginia, May 10 and 30, and Great Falls, Virginia, September 24 (Nathan Banks) in the Museum of Comparative Zoölogy.

Chrysotoxum fasciolatum De Geer.

The largest and most common species in northern New England, usually about 14 mm. in length. Readily separated from *Chrysotoxum perplexum* by its shorter first antennal joint and broader, less arcuate abdominal fasciae, the front edge of the interrupted fasciae being almost parallel with the anterior margins of the segments.